UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.usplo.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/737,281	12/16/2003	Gaohong Wei	VRT0112US	6590	
60429 CAMPRELLS	7590 11/01/2007 TEPHENSON LLP	·	EXAM	EXAMINER	
11401 CENTURY OAKS TERRACE		•	PHAM, MICHAEL		
BLDG. H, SUI AUSTIN, TX			ART UNIT PAPER NUMBER		
, , , , , , , , , , , , , , , , , , , ,			2167		
		•	MAIL DATE	DELIVERY MODE	
			11/01/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

•	·		<i>(</i> 8)			
	Application No.	Applicant(s)	00			
	10/737,281	WEI ET AL.				
Office Action Summary	Examiner	Art Unit				
	Michael D. Pham	2167				
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the c	orrespondence addre	SS			
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 16(a). In no event, however, may a reply be tire fill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	N. mely filed the mailing date of this committee (D) (35 U.S.C. § 133).				
Status						
1) Responsive to communication(s) filed on 17 Au	<u>igust 2007</u> .					
,	This action is FINAL. 2b)⊠ This action is non-final.					
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits						
closed in accordance with the practice under E	x parte Quayle, 1935 C.D. 11, 49	53 O.G. 213.				
Disposition of Claims						
4) Claim(s) 1-31 is/are pending in the application.						
-4a) Of the above claim(s) is/are withdraw	vn from consideration.					
5) Claim(s) is/are allowed.						
6) Claim(s) <u>1-31</u> is/are rejected.						
7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/or	r election requirement					
or orallings	Closton requirement.					
Application Papers						
9) ☐ The specification is objected to by the Examine						
10)☐ The drawing(s) filed on is/are: a)☐ acce						
Applicant may not request that any objection to the			4.404(-1)			
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.						
The dath of declaration is objected to by the Ex	anniner. Note the attached Office	, Action of form F 10-	102.			
Priority under 35 U.S.C. § 119						
12) ☐ Acknowledgment is made of a claim for foreign a) ☐ All b) ☐ Some * c) ☐ None of:	priority under 35 U.S.C. § 119(a)-(d) or (f).				
1. ☐ Certified copies of the priority documents have been received.						
2. Certified copies of the priority documents have been received in Application No						
3. Copies of the certified copies of the priority documents have been received in this National Stage						
application from the International Bureau	ı (PCT Rule 17.2(a)).					
* See the attached detailed Office action for a list of the certified copies not received.						
Attacherant	•					
Attachment(s) 1) Notice of References Cited (PTO-892)	4) Interview Summary	/ (PTO-413)				
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)						
3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	6) Other:	- atent Application				

Art Unit: 2167

Detailed Action

Status of claims

- 1. Claims 1-31 are pending.
- 2. Claims 1-31 have been examined.

Claim Rejections - 35 USC § 112

- 3. The following is a quotation of the second paragraph of 35 U.S.C. 112:
 - The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 4. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 28 recites "a first storage element" and "said first storage device". It is indefinite as to what applicant's intends for the first storage is to be an element or device.

Claim Rejections - 35 USC § 103

- 5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Art Unit: 2167

6. Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 7133884 by Murley et. al. (hereafter Murley) further in view of U.S. Patent Application Publication 20050021487 by Verma et. al. (herafter Verma).

Claim 1:

Murley discloses the following claimed limitations:

"Discovering a plurality of components, wherein a database comprises the plurality of components and wherein the database is stored on a storage volume;" [col. 2 lines 52-53] discloses identifies one or more source database objects in a database. Col. 4 line 2 discloses targeted database objects as they exist on the storage device or system. Col. 1 lines 15-18 discloses a database is, fundamentally, a computerized record keeping system in which large amounts of information maybe stored in a structured manner for ease of subsequent retrieval and processing. Col. 1 lines 20-22, discloses a dbms, in turn provides four primary functions: management of physical storage. Accordingly, discovering (col. 2 lines 52-53 identifies) a plurality of components (col. 2 lines 52-53 one or more database objects), wherein a database (col. 2 lines 52-53, a database) comprises the plurality of components (col. 2 lines 52-53, database objects in a database) and wherein the database is stored (col. 1 lines 15-18, stored) on a storage volume (col. 1 lines 20-22, physical storage) is suggested.]

"Selecting a component of said plurality of components;" [col. 2 lines 54-55, discloses obtains a copy of identified one or more source database objects. Accordingly, selecting (obtains a copy of identified) a component of said plurality of components (one or more source database objects) is suggested.]

Application/Control Number: 10/737,281

Art Unit: 2167

"generating a point-in-time image of said component" [col. 4 lines 1-2, generate a pointin-time image of the targeted database objects as they exist on the storage device.]

Murley does not explicitly disclose

"Selecting a data management resource of a plurality of data management resources using an attribute of said component; and"

"Generating a point-n-time image of said component using said data management resource" alone.

On the other hand, Verma, discloses

"selecting a data management resource of a plurality of data management resources using an attribute of said component" [Abstract, each resource manager (data management resources) independently maintains metadata (attribute) associated with a collection of files (component) that are contained within the scope of a resource manager, such as the files within a subdirectory corresponding to the resource manager. [0036], when a file is accessed in a transacted file system, the file system needs to know exactly which resource manager is responsible for maintaining the transactional metadata for that file. Further disclosing, files may be associated in other ways, such as by having the same file extension, having timestamps within a common time frame, by sizes, and may even have tags stored within that identifies a resource manager through some other means. 0009, users can select properties on a per-resource manager basis such as the

size of the log file and/or the type of logging to be performed, to obtain different levels of performance, reliability, feature availability, and manageability within a single volume.

Accordingly, selecting a data management resource (0036, which resource manager) of a plurality of data management resources (abstract, each resource manager) using attribute of said component (0009, users can select properties on a per-resource manager basis, such as the size of the log file) is suggested.].

"Generating a point-n-time image of said component using said data management resource" [[0035], The resource manager typically provides transactional services and functionality, e.g. exposed through APIs. Further disclosing, 0035, the resource manager is thus the unit of management for various resources that do not exist in non-transacted file systems as well as for some resources (e.g. log files) that do. [0011], to facilitate use of a resource manager, application programming interfaces may be provided, including functions to create, start, and shut down a resource manager. Other functions may be defined such as to back up and restore files associated with a resource manager, and employ point-in-time recovery of a particular state in time of a resource manager. Accordingly, generating a point-in-time image (0011, employ point-in-time recover of a particular state in time of a resource manager) of said component (0011, back up and restore files associated with a resource manager) using said data management resource (0011, resource manager) is suggested.]

Murley, Verma, and Applicant's invention all are directed to recovery systems using point-in-time images of databases. Accordingly, Murley and Verma are within the same field of

Art Unit: 2167

various users, databases, and other entities.

endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have applied the disclosure resource managers of Murley above, to the disclosure of Verma for the purpose of providing different properties to match different needs of

Claim 2:

The combination of Murley and Verma discloses in Murley the following claimed limitations:

"Determining a structure of said database; and" [col. 4 lines 11-12, identifies changes made to the target database objects that are not yet reflected in external storage]

"Identifying each of said plurality of components using said structure" [col. 4 lines 11-12, identifies changes made to the target database objects that are not yet reflected in external storage]

Claim 3:

The combination of Murley and Verma discloses in Murley the following claimed limitations:

"Selecting said component of said plurality of components to include within a point-intime images of said database" [col. 2 lines 60-64, creates a snapshot of the one or more source
database objects at a time after the point-in-time and in a manner that does not substantially
block access to the source database objects in the database, and makes the snapshot consistent as
of the point-in-time.]

Claim 4:

The combination of Murley and Verma discloses in Murley the following claimed limitations:

"Selecting at least one of a database directory, a table space container, and a redo log directory." [col. 4 lines 53-58, if the log entry has not been applied, the update is externalized to the image copy. If the log entry has been applied, the current log entry is skipped and the next log entry is evaluated.]

Claim 5:

The combination of Murley and Verma discloses in Verma the following claimed limitations:

"Selecting said data management resource using said attribute of said component and a user-defined policy." [0009, users can select properties (user-defined policy) on a per-resource manager basis, such as the size of the log file (attribute of said component).]

Claim 6:

The combination of Murley and Verma discloses in Verma the following claimed limitations:

"Selecting said data management resource using at least one of a size attribute, a type attribute, a structure attribute, and a location attribute. "[0009, users can select properties on a per-resource manager basis, such as the size of the log file.]

Claim 7:

The combination of Murley and Verma discloses in Verma the following claimed limitations:

"Defining a component size range; and" [0009, users can select properties on a perresource manager basis, such as the size of the log file]

"Selecting said data management resource in response to a determination that said size attribute is within said component size range." [0009, users can select properties on a perresource manager basis, such as the size of the log file]

Claim 8:

The combination of Murley and Verma discloses in Murley the following claimed limitations:

"Selecting a point-in-time image creation process" [0011, point-in-time recovery]

Claim 9:

The combination of Murley and Verma discloses in Verma the following claimed limitations: "wherein said point-in-time image creation process comprises at least one of: a file-level pointin-time image creation process, a directory-level point-in-time image creation process, a file system-level point-in-time image creation process, a storage device-level point-in-time image creation process, a volume-level point-in-time image creation process, and a volume group-level point-in-time image creation process" [0011, back up and restore the files].

Claim 10:

The combination of Murley and Verma discloses in Murley discloses the following claimed limitations:

"Selecting at least one of: a snapshot creation process, a storage checkpoint creation process, and a file copy command, and a backup utility process" [col. 2 lines 60, creates a snapshot]

Claim 11:

The combination of Murley and Verma discloses in Murley discloses the following claimed limitations:

Art Unit: 2167

"Restoring said database using said point-in-time image of said component." [col. 2 lines 44-51, recover database objects]

Claim 12:

The combination of Murley and Verma discloses in Murley the following claimed limitations:

"Said database is initially stored within a first storage region" [col. 5 line 13, original or source database]

"Said restoring comprises,

Restoring said database to a second storage region" [col. 5 lines 17-20, can both generate a copy of a database that is consistent at a specified arbitrary time, or it can recover and replace a database with a consistent point-in-time copy of itself]

Claim 13:

Murley discloses the following claimed limitations:

"Means for discovering a plurality of components, wherein a database comprises the plurality of components, and wherein the database is stored on a storage volume;" [col. 2 lines 52-53 discloses identifies one or more source database objects in a database. Col. 4 line 2 discloses targeted database objects as they exist on the storage device or system. Col. 1 lines 15-18 discloses a database is, fundamentally, a computerized record keeping system in which large amounts of information maybe stored in a structured manner for ease of subsequent retrieval and processing. Col. 1 lines 20-22, discloses a dbms, in turn provides four primary functions: management of physical storage. Accordingly, means for discovering (col. 2 lines 52-53 identifies) a plurality of components (col. 2 lines 52-53 one or more database objects), wherein a database (col. 2 lines 52-53, a database) comprises the plurality of components (col. 2 lines 52-

53, database objects in a database) and wherein the database is stored (col. 1 lines 15-18, stored) on a storage volume (col. 1 lines 20-22, physical storage) is suggested.]

However, Murley does not explicitly disclose

"means for associating a data management resource with a component of said plurality of components; and"

"means for generating a point-in-time image of said component using said data management resource"

On the other hand, Verma, discloses

"Means for associating a data management resource with a component of said plurality of components; and" [Abstract, each resource manager (data management resources) independently maintains metadata associated (associated) with a collection of files (component) that are contained within the scope of a resource manager, such as the files within a subdirectory corresponding to the resource manager. [0036], when a file is accessed in a transacted file system, the file system needs to know exactly which resource manager is responsible for maintaining the transactional metadata for that file. Further disclosing, files may be associated in other ways, such as by having the same file extension, having timestamps within a common time frame, by sizes, and may even have tags stored within that identifies a resource manager through some other means. 0009, users can select properties on a per-resource manager basis such as the size of the log file and/or the type of logging to be performed, to obtain different levels of

Page 11

performance, reliability, feature availability, and manageability within a single volume.

Accordingly, means for associating a data management resource with a component of said plurality of components (0009, users can select properties on a per-resource manager basis, such as the size of the log file) is suggested.].

"means for generating a point-n-time image of said component using said data management resource" [[0035], The resource manager typically provides transactional services and functionality, e.g. exposed through APIs. Further disclosing, 0035, the resource manager is thus the unit of management for various resources that do not exist in non-transacted file systems as well as for some resources (e.g. log files) that do. [0011], to facilitate use of a resource manager, application programming interfaces may be provided, including functions to create, start, and shut down a resource manager. Other functions may be defined such as to back up and restore files associated with a resource manager, and employ point-in-time recovery of a particular state in time of a resource manager. Accordingly, means for generating a point-in-time image (0011, employ point-in-time recover of a particular state in time of a resource manager) of said component (0011, back up and restore files associated with a resource manager) using said data management resource (0011, resource manager) is suggested.]

Murley, Verma, and Applicant's invention all are directed to recovery systems using point-intime images of databases. Accordingly, Murley and Verma are within the same field of endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have applied the disclosure resource managers of Murley above, to the

disclosure of Verma for the purpose of providing different properties to match different needs of various users, databases, and other entities.

Claim 14:

The combination of Murley and Verma discloses in Murley the following claimed limitations:

"Means for determining a structure of said database; and" [col. 4 lines 11-12, identifies . changes made to the target database objects that are not yet reflected in external storage]

"Means for identifying each of said plurality of components using said structure" [col. 4 lines 11-12, identifies changes made to the target database objects that are not yet reflected in external storage]

Claim 15:

The combination of Murley and Verma discloses in Murley the following claimed limitations:

"Means for associating a point-in-time image creation process with said component of said plurality of components" [figure 1, element 110, snapshot designated objects].

Claim 16:

The combination of Murley and Verma discloses in Verma the following claimed limitations:

"Means for associating said data management resource with said component of said plurality of components using an attribute of said component" [Abstract, each resource manager (data management resources) independently maintains metadata (attribute of said component) associated (associated) with a collection of files (component) that are contained within the scope

Art Unit: 2167

of a resource manager, such as the files within a subdirectory corresponding to the resource

manager.]

<u>Claim 17:</u>

The combination of Murley and Verma discloses in Verma the following claimed limitations:

"Means for associating said data management resource with said component of said

plurality of components using a user-defined policy" [0009, users can select properties (user-

defined policy) on a per-resource manager (data management resource) basis, such as the size of

(attribute of) the log file (said components of said plurality of components).]

Claim 18:

The combination of Murley and Verma discloses in Verma the following claimed limitations:

"Means for associating said data management resource with said component of said

plurality of components using at least one of a size attribute, a type attribute, a structure attribute,

and a location attribute" [0009, users can select properties on a per-resource manager basis, such

as the size of the log file]

Claim 19:

The combination of Murley and Verma discloses in Verma the following claimed limitations:

"Means for defining a component size range; and" [0009, users can select properties on a

per-resource manager basis, such as the size of the log file]

Application/Control Number: 10/737,281

Art Unit: 2167

"Means for associating said data management resource with said component in response

Page 14

to a determination that said size attribute is within said component size range" [0009, users can

select properties on a per-resource manager basis, such as the size of the log file]

Claim 20:

The combination of Murley and Verma discloses in Verma the following claimed limitations:

"Means for generating a point-in-time image of said database"

Claim 21:

The combination of Murley and Verma discloses in Murley the following claimed limitations:

"Means for restoring said database using said point-in-time image of said component"

[col. 2 lines 44-51, recover database objects]

Claim 22:

The combination of Murley and Verma discloses in Murley the following claimed limitations:

"Said database is initially stored within a first storage region, and" [col. 5 line 13, original

or source database]

"Said means for restoring comprises,

Means for restoring said database to a second storage region" [col. 5 lines 17-20,

can both generate a copy of a database that is consistent at a specified arbitrary time, or it can

recover and replace a database with a consistent point-in-time copy of itself].

Claim 23:

Murley discloses the following claimed limitations:

Art Unit: 2167

"A machine-readable storage medium having a plurality of instructions executable by a machine embodied therein, wherein said plurality of instructions when executed cause said machine to:

Discover a plurality of components, wherein a database comprises the plurality of components and wherein the database is stored on a storage volume;" [col. 2 lines 52-53 discloses identifies one or more source database objects in a database. Col. 4 line 2 discloses targeted database objects as they exist on the storage device or system. Col. 1 lines 15-18 discloses a database is, fundamentally, a computerized record keeping system in which large amounts of information maybe stored in a structured manner for ease of subsequent retrieval and processing. Col. 1 lines 20-22, discloses a dbms, in turn provides four primary functions: management of physical storage. Accordingly, discovering (col. 2 lines 52-53 identifies) a plurality of components (col. 2 lines 52-53 one or more database objects), wherein a database (col. 2 lines 52-53, a database) comprises the plurality of components (col. 2 lines 52-53, database objects in a database) and wherein the database is stored (col. 1 lines 15-18, stored) on a storage volume (col. 1 lines 20-22, physical storage) is suggested.]

"Select a component of said plurality of components;" [col. 2 lines 54-55, discloses obtains a copy of identified one or more source database objects. Accordingly, selecting (obtains a copy of identified) a component of said plurality of components (one or more source database objects) is suggested.]

"generating a point-in-time image of said component" [col. 4 lines 1-2, generate a point-in-time image of the targeted database objects as they exist on the storage device.]

Murley does not explicitly disclose

"Select a data management resource of a plurality of data management resources using an attribute of said component; and"

"Generate a point-n-time image of said component using said data management resource" alone.

On the other hand, Verma, discloses

"select a data management resource of a plurality of data management resources using an attribute of said component" [Abstract, each resource manager (data management resources) independently maintains metadata (attribute) associated with a collection of files (component) that are contained within the scope of a resource manager, such as the files within a subdirectory corresponding to the resource manager. [0036], when a file is accessed in a transacted file system, the file system needs to know exactly which resource manager is responsible for maintaining the transactional metadata for that file. Further disclosing, files may be associated in other ways, such as by having the same file extension, having timestamps within a common time frame, by sizes, and may even have tags stored within that identifies a resource manager through some other means. 0009, users can select properties on a per-resource manager basis such as the size of the log file and/or the type of logging to be performed, to obtain different levels of performance, reliability, feature availability, and manageability within a single volume.

Accordingly, selecting a data management resource (0036, which resource manager) of a

plurality of data management resources (abstract, each resource manager) using attribute of said component (0009, users can select properties on a per-resource manager basis, such as the size of the log file) is suggested.].

"Generate a point-n-time image of said component using said data management resource" [[0035], The resource manager typically provides transactional services and functionality, e.g. exposed through APIs. Further disclosing, 0035, the resource manager is thus the unit of management for various resources that do not exist in non-transacted file systems as well as for some resources (e.g. log files) that do. [0011], to facilitate use of a resource manager, application programming interfaces may be provided, including functions to create, start, and shut down a resource manager. Other functions may be defined such as to back up and restore files associated with a resource manager, and employ point-in-time recovery of a particular state in time of a resource manager. Accordingly, generating a point-in-time image (0011, employ point-in-time recover of a particular state in time of a resource manager) of said component (0011, back up and restore files associated with a resource manager) using said data management resource (0011, resource manager) is suggested.

Murley, Verma, and Applicant's invention all are directed to recovery systems using point-intime images of databases. Accordingly, Murley and Verma are within the same field of endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have applied the disclosure resource managers of Murley above, to the

Art Unit: 2167

disclosure of Verma for the purpose of providing different properties to match different needs of various users, databases, and other entities.

Claim 24:

The combination of Murley and Verma discloses in Murley the following claimed limitations:

"Determining a structure of said database; and" [col. 4 lines 11-12, identifies changes made to the target database objects that are not yet reflected in external storage]

"Identifying each of said plurality of components using said structure" [col. 4 lines 11-12, identifies changes made to the target database objects that are not yet reflected in external storage]

Claim 25:

The combination of Murley and Verma discloses in Murley the following claimed limitations:

"Selecting said component of said plurality of components to include within a point-in-time images of said database" [col. 2 lines 60-64, creates a snapshot of the one or more source database objects at a time after the point-in-time and in a manner that does not substantially block access to the source database objects in the database, and makes the snapshot consistent as of the point-in-time.]

Claim 26:

The combination of Murley and Verma discloses in Verma the following claimed limitations:

"Selecting said data management resource using said attribute of said component and a user-defined policy." [0009, users can select properties (user-defined policy) on a per-resource manager basis, such as the size of the log file (attribute of said component).]

Claim 27:

The combination of Murley and Verma discloses in Murley the following claimed limitations:

"Selecting a point-in-time image creation process" [0011, point-in-time recovery]

Claim 28:

Murley discloses the following claimed limitations:

"A first storage element to store a database; and" [original or source database]

"A point-in-time image utility configured to,

Access said first storage device;" [col. 2 lines 51-52, identifies one or more source database objects]

"Discover a plurality of components, wherein a database comprises the plurality of components;" [col. 2 lines 52-53 discloses identifies one or more source database objects in a database. Col. 4 line 2 discloses targeted database objects as they exist on the storage device or system. Col. 1 lines 15-18 discloses a database is, fundamentally, a computerized record keeping system in which large amounts of information maybe stored in a structured manner for ease of subsequent retrieval and processing. Col. 1 lines 20-22, discloses a dbms, in turn provides four primary functions: management of physical storage. Accordingly, discovering (col. 2 lines 52-53 identifies) a plurality of components (col. 2 lines 52-53 one or more database objects), wherein a database (col. 2 lines 52-53, a database) comprises the plurality of components (col. 2 lines 52-53, database objects in a database) is suggested.]

"Select a component of said plurality of components;" [col. 2 lines 54-55, discloses obtains a copy of identified one or more source database objects. Accordingly, selecting (obtains

Application/Control Number: 10/737,281

Art Unit: 2167

a copy of identified) a component of said plurality of components (one or more source database objects) is suggested.]

"generating a point-in-time image of said component" [col. 4 lines 1-2, generate a pointin-time image of the targeted database objects as they exist on the storage device.]

Murley does not explicitly disclose

"Select a data management resource of a plurality of data management resources using an attribute of said component; and"

"Generate a point-n-time image of said component using said data management resource" alone.

On the other hand, Verma, discloses

"select a data management resource of a plurality of data management resources using an attribute of said component" [Abstract, each resource manager (data management resources) independently maintains metadata (attribute) associated with a collection of files (component) that are contained within the scope of a resource manager, such as the files within a subdirectory corresponding to the resource manager. [0036], when a file is accessed in a transacted file system, the file system needs to know exactly which resource manager is responsible for maintaining the transactional metadata for that file. Further disclosing, files may be associated in other ways, such as by having the same file extension, having timestamps within a common time

frame, by sizes, and may even have tags stored within that identifies a resource manager through some other means. 0009, users can select properties on a per-resource manager basis such as the size of the log file and/or the type of logging to be performed, to obtain different levels of performance, reliability, feature availability, and manageability within a single volume.

Accordingly, selecting a data management resource (0036, which resource manager) of a plurality of data management resources (abstract, each resource manager) using attribute of said component (0009, users can select properties on a per-resource manager basis, such as the size of the log file) is suggested.].

"Generate a point-n-time image of said component using said data management resource" [[0035], The resource manager typically provides transactional services and functionality, e.g. exposed through APIs. Further disclosing, 0035, the resource manager is thus the unit of management for various resources that do not exist in non-transacted file systems as well as for some resources (e.g. log files) that do. [0011], to facilitate use of a resource manager, application programming interfaces may be provided, including functions to create, start, and shut down a resource manager. Other functions may be defined such as to back up and restore files associated with a resource manager, and employ point-in-time recovery of a particular state in time of a resource manager. Accordingly, generating a point-in-time image (0011, employ point-in-time recover of a particular state in time of a resource manager) of said component (0011, back up and restore files associated with a resource manager) using said data management resource (0011, resource manager) is suggested.

Murley, Verma, and Applicant's invention all are directed to recovery systems using point-in-

time images of databases. Accordingly, Murley and Verma are within the same field of

endeavor. It would have been obvious to a person of an ordinary skill in the art at the time the

invention was made to have applied the disclosure resource managers of Murley above, to the

disclosure of Verma for the purpose of providing different properties to match different needs of

various users, databases, and other entities.

<u>Claim 29:</u>

The combination of Murley and Verma discloses in Murley the following claimed limitations:

"A memory to execute said point-in-time image utility; and" [col. 7 lines 50-55, memory]

"A processor coupled to said memory to execute said point-in-time image utility." [col. 7

lines 55-58, processor]

Claim 30:

The combination of Murley and Verma discloses in Murley the following claimed limitations:

"wherein said first node comprises said first storage element and said point-in-time image

utility." [col. 5 line 13, original or source database]

Claim 31:

The combination of Murley and Verma discloses in Murley the following claimed limitations:

"a second node communicatively coupled to said first node, wherein said second node

comprises a second storage element to store said point-in-time image of said component." [col. 5

Art Unit: 2167

lines 17-20, can both generate a copy of a database that is consistent at a specified arbitrary time, or it can recover and replace a database with a consistent point-in-time copy of itself]

Response to Arguments

7. Applicant's arguments with respect to claims 1-31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record listed on PTO-892 and not relied, if any, upon is considered pertinent to applicant's disclosure.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D. Pham whose telephone number is (571)272-3924. The examiner can normally be reached on Monday - Friday 9am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Pham Art Unit 2167

Examiner

Cam Y. Truong Art Unit 2162

Primary Examiner

John Cottingham Art Unit 2167 Supervisor Application/Control Number: 10/737,281

Art Unit: 2167

Page 25